

# An Alternate Method Of Defogging Mirrors Before Examination?

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## Abstract

Nasoendoscopes are used as a routine in all ENT departments but there is still the need for using mirrors every now and then.

Offered here is an alternative method to add to the different methods of defogging the mirrors. It is a safe method that is economical, readily available and effective.

## INTRODUCTION

In this age of the Nasoendoscopic examination of the post nasal space, larynx and hypopharynx, the use of mirrors is very limited. There are certain instances when we have no choice but to use a mirror for examination. These can be for example, when a vocal cord check is requested by our surgical colleagues, when a nasoendoscope is not available in clinic or when a patient is suspected of vCJD, only to mention a few.

This is a skill that needs to be learnt by the trainees and practiced frequently to be able to perform satisfactorily.

It was Bozzini (Silbermann, 1978) as early as 1805 but it wasn't till Garcia (Silbermann, 1978) used a dentists mirror illuminated by daylight to view his own vocal cords that it was successfully achieved.

In 1858 Czermac (Silbermann, 1978) introduced the use of a head mirror combined with artificial light. The application of the principle of light transmission through glass fibres was first described by Lamm(1930) and has led to the development of a range of fiberoptic endoscopes. The use of fiberoptic bronchoscope to examine the larynx was described by Silbermann (1978) and later more instruments for this purpose were developed. More recently the optical system by Hopkins has led to a new range of rigid telescopes. These have the advantage of a brighter image and the illumination is via optical fibres. The resolution of the fiberoptic systems is inferior to that of the mirror and the classical mirror examination remains the preferred technique (Kerr, 1999).

Different methods have been used to avoid the mirrors and lenses from fogging during the examination. For the mirrors these include hot air, hot water, naked flame, heated trays & hot glass beads (C.W. Cummings 1986) and one of the demisting solutions for the lenses on the endoscopes.

## MATERIALS AND METHODS

We use a "Steret" to wipe our mirrors just as we are explaining to the patient what we are planning to do and reassure them. This wiping covers the mirror's reflective surface with alcohol (70% Isopropyl Alcohol) and this prevents fogging just like the more expensive defogging solutions available.

We have been using this method routinely for many years and we have found that it works really well. The patient is not scared of being burnt or scolded. And there is no discomfort during or after the procedure.

Patients in the past have wondered if the mirrors are being heated to be "Sterilized" and we had to reassure them that the mirrors were clean and this is done to prevent it from fogging up.

## DISCUSSION

Different methods for defogging that have been used in the past have not been entirely satisfactory.

The spirit lamp is dangerous and has caused fire in 125 ENT departments in the UK over the years (C.Albizzati & Mills, 1989).

There have been reports of injuries by overheating of

mirrors, the injuries by patients and staff being burnt by naked flame (C.Albizzati & Mills, 1989).

The use of hot water is not advisable as the risk of scalding is much greater and if you have to use the same water twice for the same patient it is unhygienic to use it again for the next patient, as it would be contaminated with saliva. (Some departments use baby bottle warmers as they keep the temperature of the water constant and warm water is readily available.) The other problem with water is that it ruins the reflective coating on the mirror due to repeated immersion.

The other methods require special equipment which is expensive to purchase and even more expensive to maintain and repair.

### **CONCLUSION**

Using the Sterets is a clean, safe, readily available and inexpensive alternative to the other demisting methods

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